

## ECAT Physics Chapter 11 Heat & Thermodynamics

Sr	Questions	Answers Choice
1	We cannot utilize the heat contents of oceans and atmosphere because	A. there is no reservoir at the same temperature B. there is no reservoir at the temperature lower than any one of two C. there is no reservoir at the temperature higher than any one of two D. none of them
2	One mole of any substance contain	A. same number of molecules B. different number of molecules C. may be same or different D. none of them
3	The only significant motion possessed by the mono-atomic gas represented is:	A. Translatory B. Rotatory C. Vibratory D. None of these
4	The basis to define a temperature scale that is independent of material properties is provided by	A. carbon cycle B. nitrogen cycle C. Carnot cycle D. irreversible cycle
5	When the temperature of source and sink of a heat engine become equal entropy change will be	A. Zero B. Max C. Min D. -ve
6	The heat required to raise the temperature of one mole of the gas through 1 K at constant volume is called	A. heat capacity B. specific heat capacity C. molar specific heat D. molar specific heat at constant volume
7	The bicycle pump provides a good example of	A. first law of thermodynamics B. second law of thermodynamics C. third law of thermodynamics D. none of them
8	At constant temperature, if the density of the gas is increased, its pressure will:	A. One kg of a substance B. Unit volume of a substance C. One mole of a substance D. None of these
9	The number of translation degress of freedom for a diatomic gas is	A. 2 B. 3 C. 5 D. 6
10	We can express the work in term of	A. directly measurable variables B. indirectly measurable variables C. either of them D. both of them
11	If a molecule with momentum $mv$ strikes a wall and rebound then the change in momentum will be:	A. $-2 mv$ B. Zero C. $2 mv$ D. $mv$
12	If a liquid is heated in weightlessness, the heat is transmitted through	A. Conduction B. Convection C. Radiation D. Neither, because the liquid cannot be heated in weightlessness
13	The rate of change of momentum of a molecule is equal to:	A. Pressure B. Work C. Density D. Force
14	Melting point of ice	A. Increases with increasing pressure B. Decreases with increasing pressure

		C. Is independent of pressure D. Is proportional to pressure
15	A heat engine is that which converts	A. mechanical energy into thermal energy B. thermal energy into mechanical energy C. K.E into potential energy D. heat energy into light energy
16	In case of an ideal gas, the P.E associated with its molecule is	A. maximum B. zero C. minimum D. not fixed
17	The highest efficiency of a heat engine whose low temperature is 17°C and the high temperature is 200°C is	A. 70% B. 100% C. 35% D. 38%
18	If $n$ denotes the total number of molecules in cubic vessel such that $m$ is mass of each molecule and $l$ is length of each side of vessel, then $\frac{mN}{l^3}$ gives the:	A. Force B. Density C. Work done D. Pressure
19	The behaviour of gases is well accounted by the kinetic theory based on	A. microscopic approach B. macroscopic approach C. both of them D. none of them
20	In a heat engine, heat is supplied by the	A. cold reservoir B. sink C. hot reservoir D. none of them